

REMARKS

By the present response, no claims have been added, cancelled or amended. Accordingly, claims 1-48 are presently pending, and favorable reconsideration thereof is respectfully requested. Claims 1, 7, 13-16, 31 and 46-48 are the independent claims.

Applicant wishes to thank the Examiner for the careful review of the present application and of the prior art.

Allowable Subject-Matter

Applicant also wishes to thank the Examiner for the indication that claims 2-6 and 8-12 would be allowable if re-written in independent form.

35 U.S.C. § 103(a)

The Examiner has rejected claims 1, 7 and 13-48 as being unpatentable over either U.S. Patent 5,315,594 to Noser ("Noser") or U.S. Patent No. 6,654,802 to Oliva et al. ("Oliva"), in view of what the Examiner has characterized as the "admitted prior art", which applicant assumes refers to the Background section of applicant's specification.

Applicant respectfully submits that the proposed combination of references fails to satisfy the requirements for a *prima facie* case of obviousness. In this regard, the requirements for a *prima facie* case of obviousness have been well established by the Court of Appeals for the Federal Circuit, and are concisely summarized in M.P.E.P. § 2142 and 2143, which confirm that three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation

of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicant respectfully submits that at least the third of the above requirements is not satisfied, as the proposed combination of references fails to disclose at least some elements of each of the independent claims.

Applicant further respectfully submits that the first of the above requirements is not satisfied, as the Noser and Oliva references fail to provide any suggestion or motivation to modify or combine the prior art, and applicant's specification cannot be used to provide the requisite suggestion or motivation.

Elements Not Disclosed (claim 1)

Turning to the first of the above submissions, that the proposed combination of Noser or Oliva and the admitted prior art fails to disclose at least some elements of each of the independent claims, independent claim 1 of the present application recites:

1. A method of providing clear channel access on a network, the method comprising:
 - a) receiving a communication signal from a remote network element, said communication signal comprising a previous transport overhead (PTOH) portion indicative of transport overhead contents of said communication signal prior to arrival at said remote network element, and a previous path error (PPE) portion indicative of path errors present in said communication signal at said remote network element; and
 - b) modifying a transport overhead portion of said communication signal in response to said PTOH and PPE portions.

The method of claim 1, and in particular the ability to receive previous transport overhead and previous path error information and to modify the received signal based on such previous information, provides numerous

advantages over the prior art such as Noser and Oliva. Such advantages are discussed at numerous locations throughout applicant's specification and include, for example, the ability of a customer such as a phone company that has purchased network access from a carrier, to have a "clear channel" across the carrier's network, which does not destroy the customer's ability to track errors on its own upstream equipment connected to the carrier's network (see e.g. page 3, line 27 to page 4, line 2, and various other passages in applicant's specification). In contrast, in conventional systems, the carrier's network will typically include conventional line terminating equipment and section terminating equipment that will over-write the customer's transport overhead information, and conventional path terminating equipment that will over-write the customer's path overhead information, destroying the ability of the customer to distinguish between errors that occurred on its own upstream equipment and errors that occurred over the carrier's network.

Noser discloses a cross-connect for Synchronous Optical NETwork (SONET) signals, for use within a Network Element (NE) having a large number of external signal inputs. In particular, Noser discloses a SONET cross connect in which the same physical link is used between the interfaces and the matrix to carry the overhead and the payload. The cross connection function within the matrix may be used to group, concentrate and route the overhead signals between a server and the matrix. Overhead may be grouped and transported as payload. For the apparatus and system disclosed in Noser, the SONET cross-connect is merely providing a cross-connect function for the SONET paths. The path payload information along with the path overhead (POH) is to be cross-connected transparently, as shown by Noser in Fig. 4F, and the POH is transported across the matrix as part of the payload. (See e.g. the Abstract, col. 1 lines 13-23 and col. 9, lines 46 – 56 of Noser.)

Oliva discloses a system and method for determining the topology of a multi-node network, that do not reduce the originally designed information-carrying capacity of network links, or interrupt existing payload traffic. Oliva discloses that overhead data, such as the overhead data associated with the physical

layer, is specifically identified for and is used to transmit unique network and port identifiers from a source node to a destination node connected by a link and that the transmission may be continuous. Oliva discloses a system and method whereby each port in a network element has local knowledge of the identity of the corresponding port and network element at the far end of the physical link. In one embodiment, Oliva discloses a network operated pursuant to the SONET standard where the network element and the port identifiers are transmitted in an overhead from the source node to the destination node using SONET section trace bytes. (See e.g. col. 3, lines 7 – 20; col 8, lines 22 – 25 of Oliva.)

On page 2 of the present Office Action, the Examiner has conceded that “The differences between the above [i.e., Noser or Oliva] are the specific term previous and modifying of overhead on the basis of previous information.” [emphasis added]. Thus, the Examiner appears to have conceded that neither Noser nor Oliva disclose or suggest either “receiving a communication signal from a remote network element ... comprising a previous transport overhead (PTOH) portion indicative of transport overhead contents of said communication signal prior to arrival at said remote network element, and a previous path error (PPE) portion indicative of path errors present in said communication signal at said remote network element”, or “modifying a transport overhead portion of said communication signal in response to said PTOH and PPE portions”, as recited in claim 1.

However, the Examiner has stated that “according to the admitted prior art it is standard practice to overwrite overhead information based on the add/drop requirements of each interface and hence the overwriting of transport overhead is based on previous overhead to remove data that has arrived at its destination based on the instruction of the previous overhead and that the act of overwriting is also obviously an act of modification. It would have been obvious to the person having ordinary skill in this art to provide a similar arrangement for Noser or Oliva et al. because they are well known and conventional functional equivalents of [SONET] frames in the prior art.”

Applicant assumes that the term "admitted prior art" refers to the Background section of applicant's specification. However, applicant respectfully submits that subject-matter disclosed in applicant's own specification cannot be considered to be citable prior art unless applicant has made a clear and express admission to that effect, and applicant has not made any such admission in the present case. Applicant respectfully notes that M.P.E.P. § 2129.11 only purports to treat such subject-matter as prior art "Where the specification identifies work done by another as 'prior art' ...", and cites *In re Nomiya*, 509 F.2d 566, 571, 184 U.S.P.Q. 607, 611 (CCPA 1975) for this proposition. *In re Nomiya* dealt with a situation where the applicants' specification included two Figures that were expressly labelled "prior art", and were expressly described as prior art in the specification. In concluding that this amounted to an admission of citability, the Court stated, "By filing an application containing Figs. 1 and 2, labeled prior art, ipsissimis verbis, and statements explanatory thereof appellants have conceded what is to be considered as prior art in determining obviousness of their improvement." *Id.* at 571, 184 USPQ at 611-12 [footnote omitted; emphasis added]. In contrast, the Background section of applicant's specification does not specifically identify anything therein to be citable "prior art" against the present application. Applicant therefore respectfully submits that the requirements set forth in *In re Nomiya* are not satisfied, and respectfully submits that the Background section of applicant's specification is not citable prior art against the claims of the present application.

Therefore, as the Examiner has conceded that neither Noser nor Oliva disclose either "receiving a communication signal from a remote network element ... comprising a previous transport overhead (PTOH) portion indicative of transport overhead contents of said communication signal prior to arrival at said remote network element, and a previous path error (PPE) portion indicative of path errors present in said communication signal at said remote network element", or "modifying a transport overhead portion of said communication signal in response to said PTOH and PPE portions", as

recited in claim 1, it follows that the proposed combination of citable references (i.e., Noser and Oliva) fails to disclose at least some elements of claim 1. Accordingly, at least the third of the above requirements for a *prima facie* case of obviousness is not satisfied. Applicant therefore respectfully requests that the rejection of claim 1 be withdrawn.

Although applicant believes the foregoing to be technically sufficient to overcome the rejection of claim 1, applicant offers the following additional remarks for the Examiner's consideration, as applicant respectfully disagrees with the Examiner's assertion that the mere "standard practice to overwrite overhead information based on the add/drop requirements of each interface" would be encompassed by claim 1.

As noted, claim 1 recites in part, "receiving a communication signal from a remote network element , said communication signal comprising a previous transport overhead (PTOH) portion indicative of transport overhead contents of said communication signal prior to arrival at said remote network element". In contrast, as the Examiner will appreciate, when a conventional SONET signal is received from a remote network element, such as a remote Line Terminating Equipment (LTE) device or a remote Section Terminating Equipment (STE) device for example, the remote LTE or STE will have overwritten the appropriate line overhead or section overhead portions of the transport overhead of the signal. Thus, in a conventional SONET system, when a signal is received from a remote network element, the transport overhead portion (TOH) of the received signal is indicative of the new transport overhead contents that have been over-written by the remote network element. In other words, in a conventional SONET system, the transport overhead received from the remote network element is indicative of the transport overhead contents of the communication signal upon departure from the remote network element, and is no longer indicative of the transport overhead contents "prior to arrival at the remote network element", which have been overwritten.

Thus, what the Examiner has referred to as the “standard practice to overwrite overhead information based on the add/drop requirements of each interface” also fails to disclose or suggest “receiving a communication signal from a remote network element ... comprising a previous transport overhead (PTOH) portion indicative of transport overhead contents of said communication signal prior to arrival at said remote network element”, as recited in claim 1. It therefore follows that this subject-matter also fails to disclose or suggest “modifying a transport overhead portion” in response to such a previous transport overhead portion and a previous path error portion, also as recited in claim 1. Therefore, even if the Examiner were to view the stated “standard practice” as being admitted prior art, the proposed combination of Noser or Oliva with such subject-matter would still fail to disclose at least some elements of claim 1. Accordingly, for this additional reason, the proposed combination of references fails to satisfy at least the third requirement for a *prima facie* case of obviousness.

No Suggestion or Motivation (claim 1)

Applicant respectfully reiterates that “The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure”: M.P.E.P. § 2142 and 2143, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In the present case, the Noser and Oliva references fail to even recognize the existence of the problems addressed by applicant’s claimed invention, and therefore also fail to provide any suggestion or motivation to solve such problems. Thus, as applicant’s disclosure cannot be used to provide the requisite suggestion or motivation, the proposed combination of references fails to provide any suggestion or motivation to modify or combine Noser or Oliva, and therefore fails to satisfy the first of the above requirements for a *prima facie* case of obviousness. For this additional reason, applicant respectfully requests that the rejection of claim 1 be withdrawn.

Additional claims

Independent claims 7 and 13-15 recite apparatus, media and signal limitations corresponding to the limitations of claim 1 discussed above. Applicant therefore respectfully submits that a *prima facie* case of obviousness of claims 7 and 13-15 is not established, for reasons including those presented above in connection with claim 1.

Independent claim 16 recites:

16. A method of providing clear channel access on a network, the method comprising:
- a) inserting into a communication signal received at a network element, a previous transport overhead (PTOH) portion indicative of transport overhead contents of said communication signal prior to arrival at said network element, and a previous path error (PPE) portion indicative of path errors present in said communication signal at said network element; and
 - b) transmitting said communication signal to a remote device.

The method of claim 16 provides numerous advantages over the prior art such as Noser and Oliva. Such advantages are discussed throughout applicant's specification and include, for example, the ability of a carrier to provide a "clear channel" for its customers (such as phone companies) across its network, by conveying previous transport overhead and previous path error portions across its network, thereby allowing its customers to effectively receive information regarding section, line and path errors occurring on their own equipment upstream of the carrier. In contrast, in conventional systems, the carrier's network would typically include various conventional section-terminating, line-terminating and path-terminating equipment that would overwrite such previous transport overhead and path error information prior to receipt by the customer's downstream equipment.

The proposed combination of references fails to disclose or suggest “inserting into a communication signal received at a network element, a previous transport overhead (PTOH) portion indicative of transport overhead contents of said communication signal prior to arrival at said network element”, as recited in claim 16. Rather, as the Examiner will appreciate, a typical conventional network element, such as a Line Terminating Equipment (LTE) device or a Section Terminating Equipment (STE) device for example, will over-write new line overhead or section overhead portions into the transport overhead of the signal, as appropriate. Thus, in a conventional SONET system, when a signal is transmitted by a network element, the only transport overhead information inserted by that network element is the new transport overhead information that has been re-calculated by that network element. This new transport information inserted by the network element is not “indicative of transport overhead contents of said communication signal prior to arrival at said network element” as recited in claim 16, as the latter contents will have been disadvantageously overwritten by the new transport overhead information. Accordingly, the proposed combination of references fails to disclose at least this element of claim 16, and therefore, at least the third of the above requirements for a *prima facie* case of obviousness is not satisfied. Applicant therefore respectfully requests that the rejection of claim 16 be withdrawn.

Applicant further respectfully reiterates all applicable submissions presented above in connection with claim 1. For example, applicant respectfully submits that neither Noser nor Oliva provides any suggestion or motivation to modify or combine the references to arrive at the invention defined by claim 16, for reasons including those presented earlier herein. Accordingly, the proposed combination of references also fails to satisfy the first of the above requirements for a *prima facie* case of obviousness of claim 16. For this additional reason, applicant respectfully requests that the rejection of claim 16 be withdrawn.

Claims 17-30 are directly or indirectly dependent upon claim 16. Applicant therefore respectfully submits that these claims are allowable due to their dependencies, as well as the additional subject-matter that each of these claims recites.

Independent claims 31 and 46-48 recite apparatus, media and signal limitations corresponding to those discussed above in connection with claim 16. Applicant therefore respectfully submits that the proposed combination of references fails to satisfy the requirements for a *prima facie* case of obviousness of claims 31 and 46-48, for reasons including those presented above in connection with claim 16.

Claims 32-45 are directly or indirectly dependent upon claim 31. Applicant therefore respectfully submits that these claims are allowable due to their dependencies, as well as the additional subject-matter that each of these claims recites.

Formal Drawings

Applicant respectfully notes that the present Office Action Summary does not indicate whether the formal drawings, which were submitted subsequent to filing with applicant's submission dated April 3, 2001, have been accepted. Applicant respectfully requests the Examiner to confirm receipt and acceptance of the formal drawings filed April 3, 2001 in the next official communication.

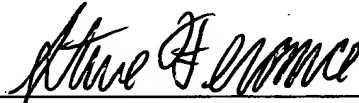
Extension of Time

Applicant hereby petitions for a one-month extension of time, to **September 10, 2004**, for responding to the outstanding Office Action mailed May 10, 2004. A check in the amount of \$110.00 is enclosed as payment of the required extension fee pursuant to 37 C.F.R. § 1.17(a)(1). The Commissioner is hereby authorized to charge any further fees that may be owing, or to credit any overpayment, to our deposit account no. 06-0713.

Conclusion

In view of the foregoing, applicant respectfully submits that the present application is in condition for allowance, and respectfully requests that a Notice of Allowance be issued. Should the Examiner have any outstanding questions or concerns, the Examiner is respectfully requested to telephone the undersigned agent at the Examiner's earliest convenience, to expedite the prosecution and allowance of this application.

Respectfully submitted,



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